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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,419	11/20/2003	Kouichi Takagi	117815	6550
25944	7590	04/18/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER CAVALLARI, DANIEL J	
			ART UNIT	PAPER NUMBER
			2836	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/18/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/716,419	<b>Applicant(s)</b> TAKAGI ET AL.	
	<b>Examiner</b> Daniel J. Cavallari	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The examiner acknowledges a submission of the amendment filed on 2/1/2007.  
The replacement figures, amendments to claims 1, 6, & 7 are accepted.

### ***Claim Objections***

The previously made objection to claim 7 has been withdrawn in view of the amendments.

Although the Figures 11, 12, 15, 16, & 17 have been properly marked as "Prior Art", the applicant has failed to mark all those drawings which are prior art as stated in the background section of the specification (See Specification, Pages 1-9) in which other figures such as 13 & 14 (Page 2) are identified as prior art and should be labeled as such.

### ***Response to Arguments***

Applicant's arguments filed 2/1/2007 have been fully considered but they are not persuasive.

The applicant argues that Nakamura fails to teach "... a semiconductor module wherein the semiconductor module includes the terminals that are configured to be connected to the relay element". The Examiner respectfully disagrees and points the applicant to Nakamura, Paragraph 37 wherein Nakamura teaches connection terminals electrically connecting terminals of the relays 34, which are attached to the relay

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cavities 36. **The connection terminals are pushed into the relay cavities 36, through an under-side, opened portion of the unit case 32,** similarly to the connection terminal of the fuse cavity 35. In addition, terminals of the electric wires 31 are crimped to the unit case. The examiner points out that unit case 32 reads on the "semiconductor module" which, as explained, includes the terminals that are configured to be connected to the relay element.

### ***Drawings***

The drawings are objected to for the following reasons:

Those Figures representative of prior art (13 & 14) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 5, 6 & 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura (US 2004/0169993 A1).

In regard to Claim 1, 2, & 5

Nakamura teaches:

- A plurality of terminals, read on by terminals connecting the switch unit to the battery (BATT) and alternator (ALT) via a wiring (31) (See Figures 1 & 3B and Paragraphs 37, 40, & 41).
- A plurality of installation sockets (39) configured to install the relay element (22) (See Figure 1 & Paragraph 29) also shown as relay cavities (4) (See Figure 12 & Paragraph 2).
- A semiconductor module (32, See Figure 1).

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- Wherein the installation socket is configured to have different relay elements installed as shown in Figure 1, in which the relays are changeable. Figure 4B further shows different relays designed and used for different components of the car (i.e. Horn, Headlamp (H/LP), ,and Fan).
- Each of the relay elements having the same outer rectangular shape and all of the same outer dimensions as is the case when two of the same relay elements (22 or 23) are use (See Figure 1 & Paragraph 29).
- Wherein the semiconductor module include the terminals that are configured to be connected to the relay element (See Paragraph 37).

In regard to Claim 6

- Wherein the semiconductor module (32) has a case (21) provided with the installation socket (39) (See Figure 1).

In regard to Claim 7

- The socket being only configures to install a relay element (as is the case with the unit (47) of figure 5 (See Paragraph 50).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Metlitzky et al. (US 2004/0080214 A1).

Nakamura teaches "the relay functions and the fuse functions by semi-conductor groups however it is unclear whether this encompasses a semiconductor relay. Figure 7 shows the use of a mechanical relay.

Metlitzky et al. (hereinafter referred to as Metlitzky) teaches a vehicle control unit incorporating a semiconductor relay (See Paragraph 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the semiconductor relay as taught by Metlitzky in place of the mechanical relay of Nakamura. The motivation would have been to reduce the size and weight of the device.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

April 4, 2007

  
CHAU N. NGUYEN  
PRIMARY EXAMINER